

Table 3

Composition	(H wt%) _{max}	(H wt%) _{rev}	P _{abs} (psia)	T _{abs} (°C)	P _{des} (psia)	T _{des} (°C)
Ti10V70Cr17Mn2.3Fe0.7	3.40	2.32	450	0	10	30
Ti10V70Cr17Fe3	2.93	1.80	450	0	10	30
Ti10V70Cr17Ni3	2.89	1.70	450	0	10	30
Ti10V75Cr12Mn2.2Fe0.8	3.58	2.35	450	0	10	60
Ti10V75Cr12Mn2.2Fe0.8	3.79	2.37	1000	20	1	20
Ti10V75Cr12Fe3	3.09	1.85	450	0	1	30
Ti20V50Cr25Mn5	3.41	2.30	450	0	1	30
Ti20V50Cr20Mn10	2.41	1.30	450	0	1	30
Ti12V64Cr20Mn1.7Fe0.6Ni1.3	3.47	2.10	450	0	10	30
Ti14V60Cr23Mn2Ni1	3.39	2.15	450	0	10	30
Ti16V55Cr26Mn2Ni1	3.53	2.23	450	0	10	30
Ti17V50Cr30Mn2Ni1	3.28	2.10	450	0	1	0
Ti19V50Cr28Mn2Ni1	3.49	2.30	450	0	1	30
Ti20V50Cr27Mn2Ni1	3.47	2.20	450	0	1	30
Ti19V45Cr33Mn2Ni1	3.33	2.10	450	0	1	30
Ti8V76.4Cr12Mn2.2Fe0.75Ni0.5	3.56	2.25	1000	20	1	20
Ti19V50Cr28Mn3	3.53	2.28	1000	20	1	20
(Ti19V50Cr28Mn3)99Ni1	3.53	2.28	1000	20	1	20
(Ti19V50Cr28Mn3)99Fe1	3.30	2.28	1000	20	1	20
(Ti19V50Cr28Mn3)99Pd1	3.41	2.20	1000	20	1	20
Ti10V75Cr12Mn2.5Ni0.5	3.75	2.31	1000	20	1	20
Ti14V63.5Cr19.5Mn2Ni1	3.52	2.30	1000	20	2	20

Another type of hydrogen storage alloys in accordance with the present invention are medium vanadium content body centered cubic hydrogen storage alloys. The crystal structures of the medium vanadium content body centered cubic phase alloys are more flexible, with respect to the high vanadium content alloys, but more stable, with respect to the low vanadium content alloys. Such alloys are shown with respective absorption and desorption capacities in Table 4. Shown in FIG. 7, is a PCT diagram demonstrating the desorption of hydrogen at 20°C for alloys $\text{Ti}_{29}\text{V}_{29}\text{Cr}_{37}\text{Mn}_3\text{Fe}_2$ (◆), $\text{Ti}_{29}\text{V}_{29}\text{Cr}_{35}\text{Mn}_5\text{Fe}_2$ (■), $\text{Ti}_{28}\text{V}_{30}\text{Cr}_{35}\text{Mn}_5\text{Fe}_2$ (▲),